



# UNITED STATES PATENT AND TRADEMARK OFFICE

CH

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,266	05/24/2001	Yoshihiro Izumi	925-197	9027

23117 7590 03/04/2004  
NIXON & VANDERHYE, PC  
1100 N GLEBE ROAD  
8TH FLOOR  
ARLINGTON, VA 22201-4714

EXAMINER

SCHECHTER, ANDREW M

ART UNIT PAPER NUMBER

2871

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/863,266	<b>Applicant(s)</b> IZUMI ET AL.	
	<b>Examiner</b> Andrew Schechter	<b>Art Unit</b> 2871	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/21/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Prosecution Reopened*

1. The indicated allowability of claims 1-5 and 7-10 is withdrawn in view of the newly discovered reference(s) to *Kumagai et al*, Japanese Patent Document No. 2000-98367. Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kumagai, et al.*, Japanese Patent Document No. 2000-98367.

*Kumagai* discloses [see enclosed machine translation] an active matrix substrate comprising: switching elements disposed in a shape of a matrix [see paragraph 0022], gate signal lines ["scanning line" attached to gate electrode 2] controlling the switching elements, source signal lines [extended from source electrode 7] connected to the switching elements, an interlayer insulating film [11] formed on the switching elements, the gate signal lines, and the source signal lines; and pixel electrodes [13 and 14] formed over at least the interlayer insulating film and in electrical communication with respective switching elements through contact holes [12] defined in the interlayer

insulating film, wherein the pixel electrodes are comprised of a photosensitive conductive material including at least one coloring agent so that at least some of the pixel electrodes function as both pixel electrodes and color filters [14, part of the pixel electrode, is made of a "conductive color resist" with "photosensitivity", see paragraph 0040]. The pixel electrode of the claim can either be elements 13 and 14 taken together or, as shown in Fig. 10b, the ITO layer of the pixel electrode can be dispensed with, with layer 14 acting alone as the pixel electrode and color filter.

*Kumagai* does not explicitly disclose the additional limitation that the source signal lines are formed orthogonal to the gate signal lines. The examiner takes official notice that it is well-known and conventional to do so, and that it would have been obvious to one of ordinary skill in the art at the time of the invention to do so with this device, motivated by the desire to make a standard rectangular array which can be driven by a standard arrangement of gate and signal line drivers at the edge of the panel, among other reasons. Claim 1 is therefore unpatentable.

The photosensitive conductive material is transparent [inherent, since it works by coloring the light which passes through it], so claim 2 is also unpatentable.

*Kumagai* discloses making a flat panel display device with this active matrix substrate, so claim 7 is also unpatentable.

*Kumagai* also discloses a liquid crystal display comprising a substrate [as discussed above] with address lines, a switching element, a pixel electrode, wherein the pixel electrode comprises a photosensitive conductive material and at least one color agent so that the pixel electrode functions as both a pixel electrode and a color filter,

Art Unit: 2871

and wherein the pixel electrode is photo-patternable due to its photosensitive nature [see paragraph 0049-0052, for instance]. *Kumagai* may or may not explicitly disclose that the pixel electrode is for applying voltage across a liquid crystal layer; the examiner takes official notice that it is well-known and conventional to do so, and that it would have been obvious to one of ordinary skill in the art at the time of the invention to do so with this device, motivated by the desire to use the pixel electrode to control the liquid crystal in a standard way to produce a display device. Claim 9 is therefore unpatentable.

The photosensitive conductive material is made from photosensitive resin and conductive particles of indium tin oxide (ITO) [see paragraph 0056], so claims 4 and 5 are also unpatentable.

4. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kumagai, et al.*, Japanese Patent Document No. 2000-98367 as applied to claims 1 and 9 above, in view of *Matsumura et al.*, U.S. Patent No. 4,902,592.

*Kumagai* may or may not explicitly disclose the photosensitive conductive material being negative type. However, positive and negative photoresists [the only two options] are well-known in the art and are considered art-recognized equivalents for making this kind of structure, as evidenced by *Matsumura* [col. 2, lines 33-61]. It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to use a negative photoresist, motivated by the equivalence of the two options. Claims 3 and 10 are therefore unpatentable.

***Election/Restrictions***

5. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. A flat panel display device.
- II. A flat panel image sensing device.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-5 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

Art Unit: 2871

the prior art, the evidence or admission may be used in a rejection under 35

U.S.C. 103(a) of the other invention.

6. During a telephone conversation with H. Warren Burnam, Jr., Reg. No. 29,366, a provisional election was made without traverse to prosecute the invention of species I, a flat panel display device, claim 7. Affirmation of this election must be made by applicant in replying to this Office action. Claim 8 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS  
Andrew Schechter  
23 February 2004

  
ROBERT H. KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800